



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Gilbert Wolrich et al.                      Art Unit : 2661  
Serial No. : 10/684,078                                      Examiner : Unknown  
Filed : October 10, 2003  
Title : METHOD AND APPARATUS FOR GIGABIT PACKET ASSIGNMENT FOR  
MULTITHREADED PACKET PROCESSING

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicant submits the references listed on the attached form PTO-1449. Applicant has not provided copies of the US patents in accordance with the waiver posted on the USPTO website.

This statement is being filed within three months of the filing date of the application or before the receipt of a first Office action on the merits. Please apply any charges or credits to deposit account 06-1050, 10559-132002.

Respectfully submitted,

Date: 4/29/04

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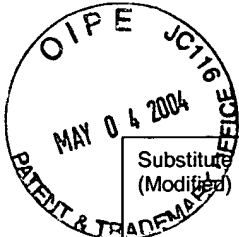
CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Date of Deposit

Michelle M. Buckley  
Signature

Michelle M. Buckley  
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Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 10559-132002	Application No. 10/684,078
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Gilbert Wolrich et al.	
		Filing Date 10/10/03	Group Art Unit 2661

### U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	6,694,380	02/17/2004	Wolrich et al.			
	AB	6,681,300	01/20/2004	Wolrich et al.			
	AC	6,668,317	12/23/2003	Bernstein et al.			
	AD	6,667,920	06/09/2003	Wolrich et al.			
	AE	6,661,794	12/09/2003	Wolrich et al.			
	AF	6,631,462	10/07/2003	Wolrich et al.			
	AG	6,631,430	10/07/2003	Wolrich et al.			
	AH	6,625,654	09/23/2003	Wolrich et al.			
	AI	6,606,704	08/12/2003	Adiletta et al.			
	AJ	6,587,906	07/01/2003	Wolrich et al.			
	AK	6,584,522	06/24/2003	Wolrich et al.			
	AL	6,577,542	06/10/2003	Wolrich et al.			
	AM	6,560,667	05/06/2003	Wolrich et al.			
	AN	6,552,826	04/22/2003	Adler et al.			
	AO	6,532,509	03/11/2003	Wolrich et al.			
	AP	6,463,072	10/08/2002	Wolrich et al.			
	AQ	6,434,145	08/13/2002	Opsasnick et al.			
	AR	6,430,626	08/06/2002	Witkowski et al.			
	AS	6,427,196	07/30/2002	Adiletta et al.			
	AT	6,426,940	07/30/2002	Seo et al.			
	AU	6,415,338	07/02/2002	Habot			
	AV	6,393,483	05/21/2002	Latif et al.			
	AW	6,389,449	05/14/2002	Nermirovsky et al.			
	AX	6,373,848	04/16/2002	Allison et al.			
	AY	6,360,262	03/19/2002	Guenthner et al.			
	AZ	6,356,692	03/12/2002	Kasper et al.			
	AAA	6,347,344	02/12/2002	Baker et al.			

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Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	ABB	6,345,334	02/05/2002	Nakagawa et al.			
	ACC	6,324,624	11/27/01	Wolrich et al.			
	ADD	6,307,789	10/23/2001	Wolrich et al.			
	AEE	6,298,370	10/02/2001	Tang et al.			
	AFF	6,289,011	09/11/2001	Seo et al.			
	AGG	6,279,113	08/21/2001	Vaidya			
	AHH	6,275,505	08/14/2001	O'Loughlin et al.			
	AII	6,272,616	08/07/2001	Fernando et al.			
	AJJ	6,256,713	07/03/2001	Audityan et al.			
	AKK	6,247,025	06/12/2001	Bacon			
	ALL	6,223,279	04/24/2001	Nishimura et al.			
	AMM	6,223,238	04/24/2001	Meyer et al.			
	ANN	6,223,207	04/24/2001	Lucovsky et al.			
	AOO	6,216,220	04/10/2001	Hwang			
	APP	6,212,611	04/03/2001	Nizar et al.			
	AQQ	6,212,542	04/03/2001	Kahle et al.			
	ARR	6,201,807	03/18/2001	Prasanna			
	ASS	6,199,133	03/06/2001	Schnell			
	ATT	6,195,676	02/27/2001	Spix et al.			
	AUU	6,182,177	01/30/2001	Harriman			
	AVV	6,160,562	12/12/2000	Chin et al.			
	AWW	6,157,955	12/05/2000	Narad et al.			
	AXX	6,145,054	11/07/2000	Mehrotra et al.			
	AYY	6,144,669	11/07/2000	Williams et al.			
	AZZ	6,141,765	10/31/2000	Sherman			
	AAAA	6,141,689	10/31/2000	Yasrebi			
	ABBB	6,134,665	10/17/2000	Klein et al.			

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### U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	ACCC	6,112,016	08/29/2000	MacWilliams et al.			
	ADDD	6,092,158	07/18/2000	Harriman et al.			
	AEEE	6,092,127	07/18/2000	Tausheck			
	AFFF	6,085,294	07/04/2000	Van Doren et al.			
	AGGG	6,085,215	07/04/2000	Ramakrishnan et al.			
	AHHH	6,079,008	06/20/2000	Clery, III			
	AIII	6,073,215	06/06/2000	Snyder			
	AJJJ	6,072,781	06/06/2000	Feeney et al.			
	AKKK	6,070,231	05/30/2000	Ottinger			
	ALLL	6,067,585	05/23/2000	Hoang			
	AMMM	6,058,168	05/02/2000	Braband			
	ANNN	6,023,742	02/08/2000	Ebeling et al.			
	AOOO	6,014,729	01/11/2000	Lannan et al.			
	APPP	6,012,151	01/04/2000	Mano			
	AQQQ	5,983,274	11/09/1999	Hyder et al.			
	ARRR	5,978,838	11/02/1999	Heinrich et al.			
	ASSS	5,970,013	10/19/1999	Fischer et al.			
	ATTT	5,961,628	10/05/1999	Nguyen et al.			
	AUUU	5,958,031	09/28/1999	Kime			
	AVVV	5,948,081	09/07/1999	Foster			
	AWWW	5,946,487	08/31/1999	Dangelo			
	AXXX	5,940,866	08/17/1997	Chisholm et al.			
	AYYY	5,940,612	08/17/1999	Brady et al.			
	AZZZ	5,937,187	08/21/1995	Kosche et al.			
	AAAAA	5,928,736	08/17/1999	Muller et al.			
	ABBBB	5,915,123	06/22/1999	Mirsky et al.			
	ACCCC	5,905,889	05/18/1999	Wilhelm, Jr.			

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## U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	ADDDD	5,905,876	08/18/1999	Pawlowski et al.			
	AEEEE	5,892,979	04/06/1999	Shiraki et al.			
	AFFFF	5,890,208	03/30/1999	Kwon			
	AGGGG	5,887,134	03/23/1999	Ebrahim			
	AHHHH	5,886,992	03/23/1999	Raatikaian et al.			
	AIIII	5,860,158	01/12/1999	Pai et al.			
	AJJJJ	5,854,922	12/29/1998	Gravenstein et al.			
	AKKKK	5,835,755	11/10/1998	Stellwagen, Jr.			
	ALLLL	5,832,215	11/03/1998	Kato et al.			
	AMMMM	5,828,863	10/27/1998	Barrett et al.			
	ANNNN	5,828,746	10/27/1998	Ardon			
	AOOOO	5,812,868	11/22/1998	Moyer et al.			
	APPPP	5,809,530	09/15/1998	Samra et al.			
	AQQQQ	5,809,235	09/15/1998	Sharma et al.			
	ARRRR	5,797,043	08/18/1998	Lewis et al.			
	ASSSS	5,796,413	08/18/1998	Shipp et al.			
	ATTTT	5,784,712	07/21/1998	Byers et al.			
	AUUUU	5,784,649	07/21/1998	Begur et al.			
	AVVVV	5,781,774	07/14/1998	Krick			
	AWWWW	5,761,522	06/02/1998	Hisanga et al.			
	AXXXX	5,761,507	06/02/1998	Govett			
	AYYYY	5,751,987	04/12/1998	Mahant-Shetti et al.			
	AZZZZ	5,745,913	04/28/1998	Pattin et al.			
	AAAAA	5,742,822	04/21/1998	Motomura			
	BBBBB	5,742,782	04/21/1998	Ito et al.			
	ACCCC	5,742,587	04/21/1998	Zornig et al.			
	ADDDDD	5,721,870	02/24/1998	Matsumoto			

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U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AEEEEEE	5,717,898	02/10/1998	Kagan et al.			
	AFFFFF	5,699,537	12/16/1997	Sharangpani et al.			
	AGGGGC	5,689,566	11/18/1997	Nguyen			
	AHHHHH	5,680,641	10/21/1997	Sidman			
	AIIIII	5,659,687	08/19/1997	Kim et al.			
	AJJJJJ	5,649,157	07/15/1997	Williams			
	AKKKKK	5,644,623	07/01/1997	Gutledge			
	ALLLLL	5,630,641	05/13/1997	Perotto et al.			
	AMMMMM	5,627,829	05/06/1997	Gleeson et al.			
	ANNNNN	5,623,489	04/22/1997	Cotton et al.			
	AOOOOC	5,613,136	03/18/1997	Casavant et al.			
	APPPPP	5,613,071	03/18/1997	Rankin et al.			
	AQQQQQ	5,592,622	01/07/1997	Isfeld et al.			
	ARRRRR	5,574,922	11/12/1996	James			
	ASSSSS	5,568,617	10/22/1996	Kametani			
	ATTTTT	5,557,766	09/17/1996	Takiguchi et al.			
	AUUUUU	5,550,816	08/27/1996	Hardwick et al.			
	AVVVVV	5,544,236	08/06/1996	Andruska et al.			
	AWWWWW	5,542,088	07/30/1996	Jennings, Jr. et al.			
	AXXXXX	5,542,070	07/30/1996	LeBlanc et al.			
	AYYYYY	5,517,648	05/14/1996	Bertone et al.			
	AZZZZZ	5,467,452	11/14/1995	Blum et al.			
	AAAAAA	5,463,625	10/31/1995	Yasrebi			
	ABBBBB	5,459,842	10/17/1995	Begun et al.			
	ACCCCC	5,452,437	09/19/1995	Richey et al.			
	ADDDDD	5,450,351	09/12/1995	Heddes			
	AEEEEEE	5,448,702	09/05/1995	Garcia, Jr. et al.			

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(37 CFR §1.98(b))

### U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AAAAAA	5,432,918	07/11/1995	Stamm			
	AGGGGG	5,404,484	04/04/1995	Bennett			
	AHHHHH	5,404,482	04/04/1995	Stamm et al.			
	AIIIII	5,392,412	02/21/1995	McKenna			
	AJJJJJ	5,392,411	02/21/1995	Ozaki			
	AKKKKK	5,392,391	02/21/1995	Caulk, Jr. et al.			
	ALLLLL	5,390,329	02/14/1995	Gaertner et al.			
	MMMMMM	5,367,678	11/22/1994	Lee et al.			
	ANNNNN	5,347,648	09/13/1994	Stamm et al.			
	AOOOOO	5,263,169	11/16/1993	Genusov et al.			
	APPPPP	5,255,239	10/19/1993	Taborn et al.			
	AQQQQQ	5,173,897	12/22/1992	Pfeiffer et al.			
	ARRRRR	5,168,555	12/01/1992	Byers et al.			
	ASSSSS	5,155,854	10/13/1992	Flynn et al.			
	ATTTTT	5,155,831	10/13/1992	Emma et al.			
	AUUUUU	5,142,683	08/25/1992	Burkhardt, Jr. et al.			
	AVVVVV	5,140,685	08/18/1992	Sipple et al.			
	WWWWW	4,866,664	09/12/1989	Burkhardt, Jr. et al.			
	AXXXXX	4,745,544	05/17/1988	Renner et al.			
	AYYYYY	4,523,272	06/11/1985	Fukunaga et al.			
	AZZZZZ	4,514,807	04/30/1985	Nogi			
	AAAAAA	4,400,770	08/23/1983	Chan et al.			
	BBBBBB	4,130,890	12/19/1978	Adam			
	CCCCCC	3,940,745	02/24/1976	Sajeve			
	DDDDDD	3,792,441	02/12/1974	Wymore et al.			
	EEEEEE	3,478,322	11/11/1969	Evans			
	FFFFFF	3,373,408	03/12/1968	Ling			

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### U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	GGGGGC	10/726,757	12/03/2003	Wolrich et al.			
	HHHHHF	10/664,202	09/16/2003	Wolrich et al.			
	IIIIIII	10/644,337	08/20/2003	Wolrich et al.			
	AJJJJJJ	10/643,438	08/19/2003	Bernstein et al.			
	KKKKKK	10/615,500	07/08/2003	Adiletta			
	ALLLLLL	10/615,280	07/08/2003	Wolrich et al.			
	MMMMMM	10/440,079	05/15/2003	Wolrich et al.			
	NNNNNN	09/476,303	12/30/1999	Wolrich et al.			
	OOOOOC	09/475,614	12/30/1999	Wolrich at al.			
	APPPPPP	09/473,571	12/28/1999	Wolrich et al.			
	QQQQQC	09/387,109	08/31/1999	Adiletta et al.			

### Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	RRRRRR	WO 01/50679	07/12/2001	WIPO				
	SSSSSS	WO 01/50247	07/12/2001	WIPO				
	TTTTTT	WO 01/48619	07/05/2001	WIPO				
	UUUUUU	WO 01/48606	07/05/2001	WIPO				
	VVVVVV	WO 01/48596	07/05/2001	WIPO				
	WWWW	WO 01/16782	03/08/2001	WIPO				
	XXXXXX	WO 01/16770	03/08/2001	WIPO				
	YYYYYY	WO 01/16769	03/08/2001	WIPO				
	ZZZZZZ	WO 01/15718	03/08/2001	WIPO				
	AAAAAA	WO 97/38372	10/16/1997	WIPO				
	BBBBBB	WO 94/15287	07/07/1994	WIPO				
	CCCCCC	EP 0 809 180	11/26/1997	Europe				
	DDDDDD	EP 0 745 933	12/04/1996	Europe				

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							Yes	No
	EEEEEEE	0 633 678	01/11/1995	Europe				
	FFFFFFF	EP 0 464 715	01/08/1992	Europe				
	GGGGGGG	EP 0 379 709	08/01/1990	Europe				
	HHHHHHH	59111533	06/27/1984	Japan				

### Other Documents (include Author, Title, Date, and Place of Publication)

Examine r Initial	Desig. ID	Document
	AAAAAAAA	Byrd et al., "Multithread Processor Architectures," <i>IEEE Spectrum</i> , Vol. 32, No. 8, New York, 1 August 1995, pp. 38-46.
	AJJJJJJJ	Doyle et al., <i>Microsoft Press Computer Dictionary</i> , 2 <sup>nd</sup> ed., Microsoft Press, Redmond, Washington, USA, 1994, p. 326.
	KKKKKKKK	Fillo et al., "The M-Machine Multicomputer," <i>IEEE Proceedings of MICRO-28</i> , 1995, pp. 146-156.
	LLLLLLLLL	Gomez et al., "Efficient Multithreaded User-Space Transport for Network Computing: Design and Test of the TRAP Protocol," <i>Journal of Parallel and Distributed Computing</i> , Academic Press, Duluth, Minnesota, USA, vol. 40, no. 1, 10 January 1997, pp. 103-117.
	MMMMMMMM	Haug et al., "Reconfigurable hardware as shared resource for parallel threads," <i>IEEE Symposium on FPGAs for Custom Computing Machines</i> , 1998.
	NNNNNNNN	Hauser et al., "Garp: a MIPS processor with a reconfigurable coprocessor," <i>Proceedings of the 5<sup>th</sup> Annual IEEE Symposium on Field-Programmable Custom Computing Machines</i> , 1997.
	OOOOOOOO	Hyde, R., "Overview of Memory Management," <i>Byte</i> , vol. 13, no. 4, 1998, pp. 219-225.
	PPPPPPPP	Litch et al., "StrongARMing Portable Communications," <i>IEEE Micro</i> , 1998, pp. 48-55.
	QQQQQQQQ	Schmidt et al., "The Performance of Alternative Threading Architectures for Parallel Communication Subsystems," <i>Internet Document, Online!</i> , 13 November 1998.
	RRRRRRRR	Thistle et al., "A Processor Architecture for Horizon," <i>IEEE</i> , 1998, pp. 35-41.
	SSSSSSSS	Tremblay et al., "A Three Dimensional Register File for Superscalar Processors," <i>IEEE Proceedings of the 28<sup>th</sup> Annual Hawaii International Conference on System Sciences</i> , 1995, pp. 191-201.
	TTTTTTTTT	Trimberger et al., "A time-multiplexed FPGA," <i>Proceedings of the 5<sup>th</sup> Annual IEEE Symposium on Field-Programmable Custom Computing Machines</i> , 1998.
	UUUUUUUU	Turner et al., "Design of a High Performance Active Router," <i>Internet Document, Online</i> , 18 March 1999.
	VVVVVVVV	Vibhatavani et al., "Simultaneous Multithreading-Based Routers," <i>Proceedings of the 2000 International Conference of Parallel Processing</i> , Toronto, Ontario, Canada, 21-24 August 2000, pp. 362-359.
	WWWWWWW	Wazlowski et al., "PRSIM-II computer and architecture," <i>IEEE Proceedings, Workshop on FPGAs for Custom Computing Machines</i> , 1993.

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